4 DETECTION OF URINE

4.1 UREASE TEST (Reference 5, pp. 191-193, Appendix A)

4.1.1 Equipment

- 4.1.1.1 Scissors
- 4.1.1.2 Tweezers
- 4.1.1.3 Scalpel or other sharp instrument (to cut cork)
- 4.1.1.4 Heat block (37° C)

4.1.2 Materials

- 4.1.2.1 Test tubes (10 X 75 mm)
- 4.1.2.2 Corks
- 4.1.2.3 Disposable pipettes

4.1.3 Reagents

- 4.1.3.1 Distilled water
- 4.1.3.2 Urease reagent
  - 4.1.3.2.1 Store at 2-8° C.
  - 4.1.3.2.2 According to the manufacturer (Sigma), reagents stored at 2-8° C will have a shelf life of 2 years from the manufacturer's quality control date.
- 4.1.3.3 Red litmus paper
- 4.1.3.4 Positive control (known urine)

4.1.4 Minimum Standards and Controls

- 4.1.4.1 A positive reagent control (known urine stain) and a negative control distilled water) must be tested and results documented in the case file. As a general rule a substrate control will not be tested nor is not necessary to test submitted control swabs.

4.1.5 UREASE TEST PROCEDURE

- 4.1.5.1 Cut an approximate 2 cm^2 piece of a suspected urine stain and the appropriate controls into small pieces. Place the cuttings into appropriately labeled 10 X 75 mm test tubes.
- 4.1.5.2 Add 3-4 drops of distilled water and 6-7 drops of urease reagent to each tube.

4.1.5.3 Cut a slit into the small end of a cork and insert a strip of red litmus paper into this slit.

4.1.5.4 Place the cork (with red litmus paper) into each test tube. Do not allow the litmus paper to touch the liquid.

4.1.5.5 Incubate the samples in a 37° C heat block for 30 minutes.

4.1.5.6 Observe any change in the color of the litmus paper. Document results in the case file.

4.1.5.7 All controls must give the expected results before a conclusion can be reached on an unknown sample. When all controls work properly and a positive reaction is observed for the unknown sample, urine is indicated to be present.

4.1.5.8 Interpretation

4.1.5.8.1	Positive Reaction =	Red litmus paper turns blue
4.1.5.8.2	Negative Reaction =	No color change to red litmus paper
4.1.5.8.3	Inconclusive Reaction =	No color change of the positive control to the red litmus paper

4.1.5.9 Reporting Results

4.1.5.9.1 Report positive test results as “Urine was indicated…”

4.1.5.9.2 Report negative test results as “No urine was indicated…”

4.1.5.9.3 Report inconclusive test results as “The test for urine was inconclusive…”

♦END